

## ROOSTING BEHAVIOR OF MALE *EUDERMA MACULATUM* FROM UTAH

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**ABSTRACT.**— Eight spotted bats (*Euderma maculatum*) were captured and released along the Fort Pierce Wash, Washington County, Utah, in August 1974. Observations indicated that *Euderma* roosts in cracks and crevices.

According to Easterla (1970, 1973), the spotted bat (*Euderma maculatum*) probably utilizes cracks and crevices as roosting sites in Big Bend National Park, Texas. Observations by Poche (1974) indicate that the spotted bat inhabits similar daytime retreats in Utah.

Between 12 and 15 August 1974, eight spotted bats were netted over Fort Pierce Wash, Utah. All were sexed and marked using a wing perforating numbering system. Only one female (apparently post-partum) was obtained, and six of the seven males captured were scrotal.

The mean weight for spotted bats captured was 13.9 g, with a range of 14.8 to 13.6 g. After marking, the bats were released individually, and the path of flight was followed with binoculars. The first individual set free on 13 August disappeared into a narrow crack along the steep-walled canyon. Easterla (1973) reported similar postrelease behavior in Big Bend National Park.

A second *Euderma* flew west of the Fort Pierce ruins when released and landed on the near-vertical walls of the Navajo sandstone cliffs, whereupon the bat walked about easily in search of a crevice. Easterla (1972) and Parker (1952) previously reported *Euderma* walking over horizontal surfaces; but the bat that we released searched over the vertical wall with great facility. J. S. Findley (pers. comm.) reported similar observations of captive spotted bats walking over volcanic rocks which, however, are more porous than sandstone. As the second bat climbed the wall, it appeared to use its ears as probes in searching for a crevice. After approximately two minutes of crawling about, the bat crept into a narrow crack about 3 cm wide.

A third spotted bat, when released on 14 August, flew south of the wash and went out of view behind a large boulder. After five minutes of searching, we located the animal beneath a rock about 50

cm in diameter. It apparently had backed underneath the fallen rock. The bat was well concealed and ordinarily would not have been noticed.

The fourth bat we released flew under a large boulder on the side of a steep incline. It was found hanging by its feet at a 15 degree angle on the side of the rock.

The fifth bat, liberated on 14 August, flew north of the wash and up the steep slopes. This animal landed on the face of the cliff, and like the second individual, it engaged in seeking out a crack into which it could withdraw. Because of the observation distance, it was impossible to detect which crack the bat selected. We climbed the cliff and in fifteen minutes located the *Euderma*. The bat had moved into a narrow angling fracture and was detected by blowing into the crack. This procedure produced a loud clicking sound by the bat, typical for the species when disturbed.

On 15 August 1974, a sixth spotted bat (female) was netted, and numerous ectoparasites were noted. The bat escaped from the holding bag while on the hood of our truck. Another male collected the same morning hosted numerous mites. These were later identified as *Cryptonyssus desultorius*, and this was the first report of an ectoparasite associated with the spotted bat (Radovsky and Poche, 1975). The male also had a large (3 to 5 mm) swollen infection on the right forearm, near the elbow. This individual was released at 2000 hours at Fort Pierce, and it flew approximately 30 m down the north side of the wash and landed in a depression on Navajo sandstone. It immediately climbed about the near-vertical cliff face, looking for a crevice. As expected, the pollex appeared to serve as the main tool for grasping.

After several unsuccessful attempts to locate a crack large enough to crawl into, the *Euderma* appeared to be "nervous."

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While we were attempting to photograph the bat, it flew from the wall to a ledge with an overhang of 3 meters. At this time, we abandoned pursuit rather than harass the bat any further.

Poche and Baillie (1974) and Poche (1975) reported observations indicating that the natural roost of the spotted bat in the Utah-Arizona region is small cracks and crevices. The findings presented here lend evidence to the validity of these earlier notions. The fact that three bats were observed in active search for factures while they were suspended almost vertically, further supports the suggestion.

We wish to express our thanks to the Nevada Power Company for financing this study. C. E. Baker and D. J. Schmidly provided helpful comments in reviewing the original draft.

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